

Initial	Date
<i>H/AE</i>	<i>5/3/12</i>
<i>CMO</i>	<i>4/30/12</i>

BA WTR  
BA SD  
Mail Stop 60189

MAY 03 2012

Memorandum

To: Project Leader, Lake Andes National Wildlife Refuge  
From: Chief, Division of Water Resources  
Subject: 2011-2012 Water Use Report/Management Plan

The subject reports for Lake Andes National Wildlife Refuge and Varilek, Sherman, Broken Arrow, and Roth Wildlife Production Areas have been reviewed and approved.

Upon review, we noted the damage that occurred in 2011 at Lake Andes NWR and Broken Arrow WPA. Once funding is secured and there are plans available to move forward to repair/replace the structures; please advise Water Resources Division prior to construction so that we can evaluate the water right implications.

Again, we acknowledge that the Owens Bay Well will be replaced in the future. Please contact Carrie Cordova of my staff a few months prior because a permit will have to be obtained from the State of South Dakota before construction can begin.

Attached is the signed approval page for your files. Thank you for submitting the report in a timely manner.

S/MEGAN ESTEP

Attachment

bcc: WTR rf

WTR:CCordova:cc:04/30/2012  
I:\WATERUSE\SD\LAKE ANDES\wateruse\_11.doc



LAKE ANDES NATIONAL WILDLIFE REFUGE  
COMPLEX

ANNUAL WATER MANAGEMENT PLAN  
2011 WATER USE REPORT  
2012 MANAGEMENT PLAN

Prepared by: Michael J. Bryan

Date: 4/23/2012

Submitted: Michael J. Bryan  
Project Leader

Date: 4/23/2012

Approved: Atma B. B. B.  
Regional Refuge Supervisor

Date: 4/30/12

Concur: [Signature]  
Chief, Water Resources Division

Date: 5/3/12

WATER USE REPORT/MANAGEMENT PLAN - *SHORT FORM* -  
REPORT YEAR: 2011

STATION NAME: Lake Andes NWR      MANAGING STATION: Lake Andes NWRC

WATER RIGHTS DATA

WATER RIGHT NO: 220-3 (**Owens Bay Well**)      PRIORITY DATE: 7/6/1956  
SOURCE: Dakota Sandstone artesian aquifer  
WATER DIVERTED: YES X      NO      IMPOUNDMENTS: YES X      NO  
MEANS OF DIVERSION: artesian well      AF STORAGE: N/A  
RATE OF DIVERSION: (see below)      AF SEASONAL: N/A  
WELLS: YES X      NO      FREE FLOWING: 2.22 CFS      or PUMPED: N/A  
GPM  
TYPE OF USE:      Fish & Wildlife: X      Domestic:  
                 Crop Irrigation:      Stock:  
                 Other:

INSPECTION DATA

*Please complete all pertinent information for ACTUAL use versus the Water Rights data.*

DATE OF INSPECTION: 8/22/2011      INSPECTED BY: Edward Rodriguez

CONDITIONS AT INSPECTION: diminishing flow from well

AF STORAGE: N/A      OR      ESTIMATED ELEVATION: N/A  
WELLS: FREE FLOWING: .50 CFS (226 GPM)      OR      PUMPED: N/A      GPM

CONDITION OF FACILITIES: Diminished flow and a deteriorating well casing will require replacement of this well in the future.

OVERALL CLIMACTIC CONDITIONS: above normal precipitation until late July.

PROPOSED WATER PROGRAM: previous attempts to reduce flow at wellhead have caused leaking around well casing. Active management is limited.

COMMENTS: This is a free-flowing artesian well.

WATER USE REPORT/MANAGEMENT PLAN - SHORT FORM -  
REPORT YEAR: 2011

STATION NAME: Lake Andes NWR      MANAGING STATION: Lake Andes NWRC

WATER RIGHTS DATA

WATER RIGHT NO: 517-3 (Lake Andes)      PRIORITY DATE: 4/22/1940

SOURCE: Andes Creek, Garden Valley Creek, other tributaries

WATER DIVERTED: YES      NO X (no longer)      IMPOUNDMENTS: YES X      NO

MEANS OF DIVERSION: N/A      AF STORAGE: 13,721 AF

RATE OF DIVERSION: N/A      AF SEASONAL: 6,813 AF

WELLS: YES      NO X      FREE FLOWING: N/A      GPM or PUMPED: N/A

TYPE OF USE:      Fish & Wildlife: X      Domestic:

Crop Irrigation:      Stock:

Other:

INSPECTION DATA

*Please complete all pertinent information for ACTUAL use versus the Water Rights data.*

DATE OF INSPECTION: 5/11/2011      INSPECTED BY: Steve Spawn, Mike Bryant

CONDITIONS AT INSPECTION: lake level was at flood stage to full through the spring and summer

AF STORAGE: <20,634 AF      OR      ESTIMATED ELEVATION: 1439.25 amsl

WELLS: FREE FLOWING: N/A      GPM      OR      PUMPED: N/A      GPM

CONDITION OF FACILITIES: Dikes crossing Lake Andes (2) were damaged by high water in 2011. Considerable emergency repair was completed by the refuge staff; however funds are needed to restore them to their pre-flood condition.

Water control structures (WCS) were replaced during 2008. New box culverts were installed in the North and South dikes that are considerably deeper than the previous ones constructed in 1940. Plastic lumber stoplogs were used for the first time in 2009. Ice damaged the new WCS on the South dike in early 2009, requiring removal of the stoplogs at and above the waterline. Repair of the damaged structure is planned for 2012.

OVERALL CLIMACTIC CONDITIONS: Above normal precipitation. Lake elevation was at or above full pool through July.

PROPOSED WATER PROGRAM: No active management planned.

COMMENTS: Elevation measured for South unit. Full pool equals 1437.25'. South unit was 2' above full pool. North unit elevation was 1439.2, which is 3' above full pool.

Water Resources examined the potential of the Garden Creek diversion during 2007. The diversion was decommissioned ~50 years ago. Hydrologist Mark Rodney determined that if the diversion were recommissioned it had the potential to contribute ~168 AF of water to Lake Andes in a normal year. This equates to .04' of elevation gain over the entire lake. The Charles Mix County Lake Restoration Organization, a local non-profit group, has taken on the challenge of improving water quality in the Lake Andes watershed. Volunteers collected basic water quality measurements on Lake Andes each month.

WATER USE REPORT/MANAGEMENT PLAN - SHORT FORM -  
REPORT YEAR: 2011

STATION NAME: Lake Andes WMD      MANAGING STATION: Lake Andes NWRC

WATER RIGHTS DATA

WATER RIGHT NO: 5250-3 (Varilek WPA)      PRIORITY DATE: 12/27/1988

SOURCE: a natural slough on **Varilek WPA** and private land

WATER DIVERTED: YES      NO X

IMPOUNDMENTS: YES X      NO

MEANS OF DIVERSION: N/A

AF STORAGE: 139 AF

RATE OF DIVERSION: N/A

AF SEASONAL: N/A

WELLS: YES      NO X      FREE FLOWING: N/A

GPM or PUMPED: N/A

TYPE OF USE:      Fish & Wildlife: X

Domestic:

Crop Irrigation:

Stock:

Other:

INSPECTION DATA

*Please complete all pertinent information for ACTUAL use versus the Water Rights data.*

DATE OF INSPECTION: ~7/2011

INSPECTED BY: Mike Bryant

CONDITIONS AT INSPECTION: high water level

AF STORAGE: <139 AF

OR ESTIMATED ELEVATION: <1614' amsl

WELLS: FREE FLOWING: N/A GPM

OR PUMPED: N/A GPM

CONDITION OF FACILITIES: N/A

OVERALL CLIMACTIC CONDITIONS: above normal precipitation

PROPOSED WATER PROGRAM: no active management

COMMENTS:

WATER USE REPORT/MANAGEMENT PLAN - *SHORT FORM* -  
REPORT YEAR: 2011

STATION NAME: Lake Andes WMD

MANAGING STATION: Lake Andes NWRC

WATER RIGHTS DATA

WATER RIGHT NO: 5251-3 (Sherman WPA)

PRIORITY DATE: 12/27/1988

SOURCE: a natural slough on **Sherman WPA**

WATER DIVERTED: YES NO X

IMPOUNDMENTS: YES X NO

MEANS OF DIVERSION: N/A

AF STORAGE: 271 AF

RATE OF DIVERSION: N/A

AF SEASONAL: N/A

WELLS: YES NO X FREE FLOWING: N/A  
GPM

GPM or PUMPED: N/A

TYPE OF USE: Fish & Wildlife: X

Domestic:

Crop Irrigation:

Stock:

Other:

INSPECTION DATA

*Please complete all pertinent information for ACTUAL use versus the Water Rights data.*

DATE OF INSPECTION: ~7/2011

INSPECTED BY: Mike Bryant

CONDITIONS AT INSPECTION: high water level

AF STORAGE: <271 AF

OR

ESTIMATED ELEVATION: <1591.7' amsl

WELLS: FREE FLOWING: N/A GPM

OR

PUMPED: N/A GPM

CONDITION OF FACILITIES: N/A

OVERALL CLIMACTIC CONDITIONS: above normal precipitation

PROPOSED WATER PROGRAM: no active management

COMMENTS:



WATER USE REPORT/MANAGEMENT PLAN - SHORT FORM -  
REPORT YEAR: 2011

STATION NAME: Lake Andes WMD

MANAGING STATION: Lake Andes NWRC

WATER RIGHTS DATA

WATER RIGHT NO: 5077-3 (Broken Arrow WPA)

PRIORITY DATE: 10/7/1985

SOURCE: Joubert Drain

WATER DIVERTED: YES X NO

IMPOUNDMENTS: YES X NO

MEANS OF DIVERSION: Dam #7 (DU Dam)

AF STORAGE: 131.2 AF

RATE OF DIVERSION: unknown

AF SEASONAL: N/A

WELLS: YES NO X FREE FLOWING: N/A

GPM or PUMPED: N/A GPM

TYPE OF USE: Fish & Wildlife: X

Domestic:

Crop Irrigation:

Stock:

Other: Recreation X

INSPECTION DATA

Please complete all pertinent information for ACTUAL use versus the Water Rights data.

DATE OF INSPECTION: ~7/2011

INSPECTED BY: Steve Spawn, Mark Heisinger

CONDITIONS AT INSPECTION: high water levels - all ponds full

AF STORAGE: <131.2 AF

OR

ESTIMATED ELEVATION: unknown

WELLS: FREE FLOWING: N/A GPM

OR

PUMPED: N/A GPM

CONDITION OF FACILITIES: some water control structures and the Platte Creek road crossing were damaged by high water. Some repairs were made in 2011. Additional repairs are planned for 2012.

OVERALL CLIMATIC CONDITIONS: Above normal precipitation. The pond behind Dam #7 was full for much of the year, storing an amount of water near the limit of our water right (131.2 AF).

PROPOSED WATER PROGRAM: Management will retain as much water as possible.

COMMENTS: Joubert Drain also known as New Holland Drain. Dam and impoundment was inspected (Safety inspection) by a contractor in 2011.

# WATER USE REPORT/MANAGEMENT PLAN - SHORT FORM -

REPORT YEAR: 2011

STATION NAME: Lake Andes WMD

MANAGING STATION: Lake Andes NWRC

## WATER RIGHTS DATA

WATER RIGHT NO: 6013-3 (Roth WPA)

PRIORITY DATE: 7/30/1997

SOURCE: tributary of Dry Creek

WATER DIVERTED: YES X NO

IMPOUNDMENTS: YES X NO

MEANS OF DIVERSION: ditch plug in tributary

AF STORAGE: 323 AF

RATE OF DIVERSION: unknown

AF SEASONAL: 212 AF

WELLS: YES NO X FREE FLOWING: N/A

GPM or PUMPED: N/A GPM

TYPE OF USE: Fish & Wildlife: X

Domestic: X

Crop Irrigation:

Stock:

Other:

## INSPECTION DATA

*Please complete all pertinent information for ACTUAL use versus the Water Rights data.*

DATE OF INSPECTION: ~7/2011

INSPECTED BY: Mark Heisinger

CONDITIONS AT INSPECTION: high water level - water flowed through outlet

AF STORAGE: <323 AF

OR

ESTIMATED ELEVATION: <1398.5' amsl

WELLS: FREE FLOWING: N/A GPM

OR

PUMPED: N/A GPM

CONDITION OF FACILITIES: good


OVERALL CLIMATIC CONDITIONS: above normal precipitation

PROPOSED WATER PROGRAM: no active management planned

COMMENTS: In the fall of 2010 we received a complaint from the adjoining landowner to the south (Lance Konrad) that the plug on Roth WPA was causing a significant amount of cropland to be inundated with water especially the last few years. He stated that when the plug was installed the USFWS assured his grandfather that we would remove the plug if there were any issues. Nothing has changed since the plug was constructed in 1997. I inspected their field and will suggest to them to remove some rocks in a crossing on their property which is likely holding water on their property. MJH



Michael J  
Bryant/R6/FWS/DOI  
04/23/2012 01:31 PM

To Carrie Cordova/R6/FWS/DOI@FWS  
cc  
bcc  
Subject Re: Missing 2011 Water Use Reports. 

Hi Carrie,

Here is the electronic file. It was completed in January. Not sure what happened to it from there. Hard copy is on its way to Tomi Buskness for signature. Hope this helps!

Mike



Water Use LAN 2011.docx

Mike Bryant  
Project Leader  
Lake Andes National Wildlife Refuge Complex  
South Dakota  
605 487-7603  
Carrie Cordova/R6/FWS/DOI



Carrie Cordova/R6/FWS/DOI  
04/20/2012 11:14 AM

To Ann Timberman/R6/FWS/DOI@FWS, Mark  
Koepsel/R6/FWS/DOI@FWS, Bob F  
Johnson/R6/FWS/DOI@FWS, Bill Berg/R6/FWS/DOI@FWS,  
Tom Reed/R6/FWS/DOI@FWS, Michael J  
Bryant/R6/FWS/DOI@FWS, Connie  
Mueller/R6/FWS/DOI@FWS, Jack  
Heisler/R6/FWS/DOI@FWS, Steve  
Kallin/R6/FWS/DOI@FWS, Rob Holm/R6/FWS/DOI@FWS  
cc Meg Estep/R6/FWS/DOI@FWS  
Subject Missing 2011 Water Use Reports.

Good Morning Folks,

I am missing the reports for the following stations:

Arapaho NWR including Bamforth, Hutton and Mortenson NWRs  
Crescent/North Platte NWRs  
Lost Trail/Swan River NWRs including Smith Lake, McGregor Meadows, Batavia,  
Blasdel and Flathead WPAs  
CMR NWR/WMD  
Lee Metcalf NWR  
Lake Andes NWR  
Waubay NWR/WMD  
Bear River MBR - we received the 2010 HMP (in lieu of 2009 Water use Plan); station  
did not complete 2011 HMP (correct?); is station planning to complete 2012 HMP?

